

NAVY PROGRAMS

Strategic Sealift Program (SSP)

The Strategic Sealift Program (SSP) acquired nineteen Large, Medium Speed (LMSR), Roll-on/Roll-off (RO/RO) vessels in the following four phases: the National Steel Shipbuilding Company (NASSCO) conversions, Avondale Industries new construction, Newport News Shipyard conversion ships, and NASSCO new-construction. These ships are designed to transport or provide afloat pre-positioned combat equipment for a projected military force. The notional cargo per ship has equipment for one-third of a heavy Army brigade task force and its supporting supplies. The LMSRs are 950 feet long, 106 feet wide, and have a displacement of 55,000 long tons. They are diesel-powered and are capable of operating at 24 knots. The sealift ships are capable of self-sustained RO/RO and Lift-on/ Lift-off (LO/LO) operations at a pier and also at anchorage. In addition, they must provide an In-The-Stream (ITS) capability using their stern and side port ramps for delivery of RO/RO cargo to lighterage via a RO/RO Discharge Facility. The LMSR ships are not armed and do not have a combat system. They do have a C3I suite sufficient to perform their intended mission in conjunction with other naval vessels.

As authorized in the acquisition strategy, developmental testing has been limited, focusing on production assurance testing by government agents in conjunction with the builders. Navy, U.S. Coast Guard, and American Bureau of Shipping representatives witnessed systems and integration testing.

The Initial Operational Test and Evaluation (IOT&E) (Operational Test-IIA) for the NASSCO-conversion LMSR ships was conducted during September 1996, aboard United States Naval Ship (USNS) SHUGHART in Savannah, Georgia, at sea, and at anchorage in Hampton Roads, Virginia. The test was conducted in conjunction with a planned Army sealift deployment exercise, which moved a representative load of Army equipment (over 1,000 pieces including tanks, trucks and various helicopters) for the 3rd Infantry Division. Limited ITS operations were also conducted.

TEST & EVALUATION ACTIVITY

The IOT&E (Operational Test- IIB) for the Avondale Industries new construction LMSRs, originally scheduled for July 1998, was delayed by several production issues and by the difficulties of providing sufficient Army unit equipment for the test. After extensive coordination with the Commander, U.S. Central Command (CENTCOM), USNS SEAY was selected as the test platform to conduct the Operational Test- IIB while supporting CENTCOM's BRIGHT STAR 01/02 Exercise.

Due to leakage of hydraulic fluid from one of the ship's controllable reversible propellers and the events of September 11, 2001, the Operational Test- IIB was postponed until October 2001. The test was halted in December 2001 because of a failure of auxiliary propulsion equipment, which prevented the ship from attaining the required 24-knot transit speed; the test will be completed in early FY03. Additional testing of ITS discharge of cargo was conducted in FY02.

TEST & EVALUATION ASSESSMENT

The early phase IOT&E (Operational Test-IIA) revealed the NASSCO conversion LMSR to be operationally effective and potentially operationally suitable. No significant deficiencies were observed from the operational testing, which focused on ship capabilities. Only limited operations in low sea-states were conducted during this test. Deficiencies were identified in compatibility, interoperability, and



Strategic Sealift Ship preparing to embark tracked and wheeled vehicles through its extended stern cargo ramp.

NAVY PROGRAMS

training. Considerable data has been collected in the Operational Test Agencies' assessments of the Newport News Shipyard conversion ships and the NASSCO new-construction LMSR, but the reports of those assessments have yet to be delivered.

ITS RO/RO operations (doctrine, training, expected offload flow rate, and stern ramp operations) and LO/LO capabilities, including control of the lift crane pendulation, have not been comprehensively tested because the sea states encountered during testing have typically not been stressing.

It is highly probable that LMSR ship mission performance will be hindered by existing deficiencies in the Strategic Sealift System. Shortfalls in the sea state 3 lighterage system (capability, inventory, interoperability and doctrine) and RO/RO discharge facility equipment may adversely affect our ability to project power in a timely manner in situations where adequate port facilities are not available. World-wide, there are a total of only 113 ports identified as having sufficient depth of water and length of berth to allow pier side offload of an LMSR and only 31 of these are in locations other than the Americas, Europe, Australia, and Japan. ITS offload of small vehicles has been satisfactorily demonstrated through sea state 2, but a tactically representative equipment load has not been demonstrated under operationally stressing conditions. Additional testing of ITS offload capability in sea state 3 must be performed when sea state 3-capable lighterage connectivity with RO/RO Discharge Facility equipment is developed.